ROLE OF PHARMACIST IN CHILD CARE

Jerry Okolo

Prevention in childhood of health problems through early interventions guards against adverse and dangerous sequelae that are difficult, expensive and often impossible to correct in later years. Children especially in third world countries are very vulnerable to infections and preventable dieseases. Thus, considerable efforts should be made to prevent health problems.

Study 1

Children's Health Care in Commonwealth Countries

As part of the study, a questionnaire was dispatched through the Secretariat of the members of the Commonwealth Pharmaceutical Association. It was completed by an executive member of the Association and returned by August 1991. Out of 31 countries, 17 (54%) responded (Table 1).

The purpose of the studies was to:

1. Collect base line data and information for planning and formulating policies on the Pharmacists Contribution towards child health care.

2. Appraise the health situation among children in these countries.

3. Assess the present and previous involvement of Pharmaceutical Association in the promotion of child care.

4. Identify Pharmacist Contribution in:

    - Immunisation Programmes
    - Education of mothers, healthcare workers and public children's health
    - Creating awareness on children about dangers of misuse of medicine
    - Prevention and monitoring of childhood disease
    - Participation in programme campaign

Table 1: The countries that responded to the questionnaire and the statistical information supplied.

Country	Total Population (million)	Population Under 5 (million)	No of Pharms. (thousand)	Pharmacist/ Inhabitant Ratio	Prevalent disease in children	% Immunisation under 5
Barbados	0.25	N/A	N/A	N/A	RTI	96%
Canada	26.3	1.8	19,000	1:1400	RTI Cough	98%
Ghana	14.6	2.8	N/A	N/A	Diarrhoea Pneumonia	75%
Jamaica	2.4	0.3	N/A	N/A	N/A	98%
Kenya	23.2	4.6	800	1:28,000	Malaria Diarrhoea	80%
Malaysia	17.4	2.6	N/A	N/A	N/A	75%
Malta	0.35	0.3	430	1:800	RTI Asthma	98%
Mauritius	1.1	0.09	N/A	N/A	N/A	95%
Nigeria	115.2	20.5	6,000	1:20,000	Malaria Diarrhoea	80%
Sierra Leone	4.0	0.7	120	1:33,000	Diarrhoea RTI	85%
Sri Lanka	17.0	1.9	1,000	1:17,000	Pneumonia Diarrhoea	78%
Uganda	18.1	3.8	400	1:45,000	Diarrhoea RTI	65%
United Kingdom	57.1	3.9	38,000	1:1,500	RTI Gastritis	98%
Zaire*	34.5	6.4	N/A	N/A	Diarrhoea Malaria	69%
Zambia	8.1	1.7	520	1:1,600	GIT problems Malaria	78%
Zimbabwe	9.4	1.8	650	1:15,000	RTI Diarrhoea	82%

* Non member CPA

Children diseases: In many of the developing countries, Diarrhoea was implicated as a major childhood disease with up to ten countries (58%) reporting it as one of the major problems in children. Malaria and respiratory tract infections are also very common, accounting for 45% n = 7 and 40% n = 6 respectictively.

Malaria is very endemic in the African and Asian regions. Resistant strains are commonly reported. In most developed countries there is a prevalence of respiratory tract infections including Pneumonia, Asthma and whooping cough. Although measles and polio are less commoinly encountered, it seems to be more severe in African children especially when adequate attention is not given to the child.

Immunisation: All the countries have an existing immunisation in operation and immunisation for children aged five have reached up to 95% in most developing countries. In almost all the countries, the Ministry of Health plays a central role in immunisation programmes. The participation of pharmacists and the Association is limited mainly to educating the public and encouraging compliance in mothers to immunise their children. In Jamaica, nearly 100% immunisation has been achieved. This is because of a national policy that requires school children to be compulsorily immunised prior to entry into school.

Pharmacists: There is a serious shortage and maldistribution of pharmacists in all developing countries. In general, the pharmacist/inhabitant ratio is as high as 1:33,000 in a country like Sierraleone up to 1:45,000 in Uganda. In Nigeria, with a population of over 100 million people, there are about 6000 pharmacists corresponding to almost 1:20,000 population. Imbalances between urban and rural population is quite high. In rural areas, the ratio can be up to 1:100,000 population. In contrast, there is about one pharmacist to about 500 Maltese population and about 1:1,400 and 1:1,500 in Canada and U.K. respectively.

Professional training: The number of years spent in training in most countries averages four years. Undergraduate training include module based on the country's need and relevance. However, this study reveals that not many countries include courses relating to infant nutrition. In fact only four countries including Malta offer such courses in its undergraduate curriculum. Almost thirteen countries (81%) offer programmes relating to immunisation and childhood diseases. All the countries have a Continuing Professional Education (CPE) for Practising Pharmacists and in U.K. accreditation of CPE is currently being implemented. In Canada, a comprehensive Competence Assessment exam is undergone every 3-4 years as part of relicencing requirement. Most developing countries had no organised CPD and are handicapped by logistics of organisation and funding.

Professional Association: The study shows that most of the Pharmaceutical Associations have no official relationship with WHO/UNICEF though there is close collaboration with them. There is also a good relationship between the Association and the Ministry in charge of health. The Association organises seminars and conferences for its members and in some case journals are often used for communication. However, these are not readily available in some countries. Other problems facing most countries are lack of audio visual aids and distant learning materials.

Health Education Campaign: There is a Health Education Unit in all the countries studied. The ministry of health is often in charge of health education campaign. Eight countries (50%) actively contributes articles in magazines and newspaper in promotion of Childhood Child health whereas four countries have been involved in programmes on Television/Radio relating to its activity. In Kenya, the Pharmaceutical Association is actively involved in promoting Oral Rehydration Therapy (ORT) through Radio talks to the public and specifically directed to mothers.

Study 2

Contributions of Pharmacists in Nigeria to childcare

A study was conducted among Community Pharmacists in Nigeria to:

- Examine the interest, attitude and contribution of Pharmacists in the prevention and management of childhood problems in their community.

- Determine the present and future involvement of Pharmacists in training and educating other health care workers.

- Determine the feasibility of attendance the role of the laboratory pharmacist outside the pharmacy.

Results of Study 2 show responses on:

		Yes (%)	No (%)	Not-sure (%)
1.	Pharmacists previous role in child care	A3(63%)	21 (30%)	6 (9%)
2.	Previous participation in seminar/confrences and update	58 (69%)	22 (31%)	
3.	Participation in paediatric update	5 (7%)	65 (92%)	
4.	Involvement in lecture/ talks in school children	8 (11.4%)	62 (58.6%)	
5.	Previous visit to Children Homes and Institutes	7 (10%)	63 (90%)	
6.	Future willingness to participate in the above programmes	65 (92.5%)		5 (7.2%)
7.	Involvement in training and update of health workers	6 (8.5%)	64 (61.5%)	
8.	Importance of training auxilliary health workers	66 (94.2%)		4 (5.8%)

Study shows that only 63% (n = 43) of Phamacists believe they have been contributing adequately to child care previously. 91.2% (n = 66) acknowledged the importance of training auxilliary health workers though only 8.5% n = 6 have been involved in such training. Although 58 (69%) have participated in a seminar/conference, only 5(7%) have participated in a paediatric update.

Study 3

Needs of Health Care Workers in Nigeria

To determine the idea and training requirements/limitations of these health workers, a questionnaire was presented to 212 auxilliary health care workers in various parts of the country. How these needs can be met by the pharmacist was also examined.

Results of Study 3 show responses on:

		Yes (%)	No (%)	Not-sure (%)
1.	Sufficiency of auxilliary health workers	12 (5.6%)	140 (66%)	30 (14%)
2.	Adequate drug information to the Public	41 (19.3%)	119 (51%)	48 (24%)
3.	Whether training involves ration use of medicine	109 (56.4%)	92 (43.3%)	
4.	Knowledge about immunisation, breast-feeding, childhood disease	69 (35%)	106 (50%)	17 (8%)
5.	Previous involvement of Pharmacist in training programme	73 (25%)	112 (58%)	31 (14%)
6.	Whether involvement will improve knowledge about drug use	138 (65%)	28 (13.3%)	46 (25%)

Result shows that there are insufficient health care workers. Less than 20% n = 41 agreed they receive adequate training to enable them to carry out their duty properly. 92 workers (43.3%) agreed that they are not receiving proper guide on use of certain drugs and only 69 (35%) have adequate knowledge about immunisation, childhood diseases. Pharmacists have been involved in their training 25 (73%) and their greater involvement would contribute further to their educational needs.

However, a greater number 138 (65%) thinks the pharmacist will be of importance to them.

Study 4

A model Diarrhoea Control and Training Unit

A cost-benefit analysis of establishing a Diarrhoea Control and Training Unit in a rural district of about 18,000-22,000 population was made. Diarrhoea episodes is believed to occur in 2-3 out of every 12 children weekly in most third world countries ( ). Thus, an estimated 300 patients will use the clinic every week. This will help minimise the Problem of Congestion commonly encountered in hospitals. Besides it will save ample time (average time spent in clinic being 8-12) and energy (average distance of 10-17 km) walking to the hospital. The expenses needed to set up such a clinic is estimated at as little as U$ 1700 with an annual running cost or training and health education campaign estimated at about U$ 2400 (excluding Salary for Pharmacists).

Such campaign will involve information on oral Rehydration Therapy, rational use of antibiotics and antimotility drugs in diarrhoea as well as messages on proper nutrition and breast feeding. The possibility of developing and sourcing ORT from local materials will also be explored in this clinic.

Discussion

Diarrhoea accounted for more than a half of the number of diseases commonly mentioned in most developing countries. Malaria and respiratory tract infections are also common. Malnutrition is also severe in some parts of Africa and these are sometimes due to lack of knowledge of nutritional needs of the young child. Malnutrition also follow frequent episodes of diarrhoea, measles and respiratory tract infections.

Though up to 75% immunisation has been achieved in most countries, efforts should be made to sustain these by educating the Public on importance of immunisation. This is an area Pharmacists should be actively involved. Pharmacists in Nigeria would also like to participate in future immunisation programmes. The Family Health Care report of the Commonwealth Pharmaceutical Association stated that the Pharmacy is an ideal environment for provision of such information and advice. These roles can be developed at a national level

by Pharmaceutical Association of member countries. They should also be involved in immunisation campaigns and other health education campaign to the public. In some countries pharmacists' contributions have included distribution and storage of vaccines.

For Pharmacists to play an active role in child care, training modules in nutrition, children disease and immunisation should be incorporated in undergraduate training. Regular updates and continuing education programmes in this aspect is also necessary. Updates should be made more accessible to pharmacists.

In remote areas of many third world countries, medicines are prescribed and supplied by workers who are neither medically or pharmaceutically competent. Their level of training are inadequate and vary considerably.

The WHO Consultative Group on the Role of Pharmacist in Health Care has advised the use of non-Pharmacists health personnel as an interim measure in rural areas where there is lack of qualified pharmacists. However, to ensure that such essential services to the Public are not compromised, support and training should be given to them. The CPA report on family Health care also states that Pharmacists should be involved in training and update of health care workers. 53% (n = 158) health care workers in Nigeria acknowledged the vital role of Pharmacists in their training and update.

In most developing countries, there is lack or limited access to Professional health care services (Bush JP 1990). This study has shown that there are lack of Pharmacists especially in the rural areas. Moreover, there are a number of children diseases eg diarrhoea where misuse of drug is still a big problem. This is because people have no ready access to information on the correct use of medicine. Study by (Buchanan N. 1989) shows that self care of which use of medicine is a major component is believed to account for about 80% illness episode in developing countries.

The need to know about medicine is also important in children. "Helping a billion children learn about health" is a report of WHO/UNICEF International Consultation for School Age Children held in 1985. The report points out the fact that children learn health daily from parents, sibblings, peers, communities and communication media whether or not they receive formal education.

It seems reasonable to suggest that creating awareness in children through those who are in close contact with them - parents, health care workers, school administrators etc is a strategy to improve medicine use in children as well as prevent early health problems.

The Pharmacist is by nature of his training and present orientation fully equipped to play very prominent role in this aspect. The planning and formulation of policy guidelines are important tools necessary so that they will be able to contribute their utmost. This is where the Commonwealth Pharmacy Association and National Association have a role. A number of Pharmacists in Nigeria have shown an interest to extend their services outside Pharmacies and give lectures to school children. This will be further explored and developed.

References

Buchanan N. (1989). Self medication in a developing countries. African Medical Journal 56 (pp 11 - 13).

Bush P.J. (1991). Lets teach children about Medicine International Pharmacy Journal vol. 4 No 5 (pp 209 - 211).

Commonwealth Pharmaceutical Association Report. Family Health Care Working Group. Hamilton, Ontario, August 1991.

World Health Organisation (1990). Report of a WHO Consultative Group on Role of Pharmacist in the Health Care System. Geneva, Switzerland.

World Health Organisation (1986). Report of the WHO/UNICEF International Consultation on Health Education for School Age Children. Geneva, Switzerland.